

## MRXBOX95AB-WH2 MECHANICAL VENTILATION WITH HEAT RECOVERY

UP TO 95% EFFICIENT, SAP APPENDIX Q RECOGNISED.  
WALL/CUPBOARD MOUNTING DESIGN FOR MEDIUM TO LARGE  
HOUSES & APARTMENTS.



## BENEFITS

**MRXBOX95AB-WH2** is designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery. Tempered air is delivered into 'living' areas whilst extracting moisture laden air from 'wet' areas, creating comfortable well ventilated homes. The unit has been designed with automatic summer bypass and the facility to commission the supply & extract fans independently on both minimum and maximum speeds.

### MEETS BUILDING REGULATIONS

SAP Appendix Q recognised. Part F&L - England & Wales. Scottish technical handbook (BRE398 referenced). Technical booklet K1998.

### OPTIMUM PERFORMANCE

Low Specific Fan power and high efficiency results in SAP Q.

### SUITABLE FOR LARGER APPLICATIONS

Designed to meet the duty for medium to large properties including 3 storey.

### COMPACT

The unit fits easily into cupboards not taking up valuable storage space.

### EXTREMELY LOW NOISE LEVELS

Quiet running unit ensuring occupant acceptability.

### ADDED SECURITY

Windows may be kept closed.

### LED INDICATORS

Clear vision showing operation modes and servicing / maintenance required.

### IMPROVES INDOOR AIR QUALITY

High efficiency filters helps to create a healthy living environment.

### LOW & EASY MAINTENANCE

Easy accessible filters from front cover – no tools required. Filter replacement typically every 12 - 18 months.

### DESCREET RUN MONITOR

Records units operational time.

### INTEGRAL AUTOMATIC SUMMER BYPASS

Air will automatically bypass the heat exchanger to deliver fresh clean air during warmer months.

### INTEGRAL FROST PROTECTION

Protects the unit during extreme cold spells.

### INTEGRAL HUMIDITY SENSOR

To automatically boost the fan when humidity levels exceeds the adjustable set point.

### PRE-COMMISSIONING FILTER PROTECTION

Filters are covered in a removable protective film to prevent clogged up filters prior to occupant handover.

### SIMPLE FAN CONTROLS

Independent controls for supply & extract for quick and easy commissioning.

### REMOTE SWITCH AVAILABLE (MRXBOX95-3SWITCH)

A three position switch for suitable location within the property for independent user control, trickle, boost and summer boost facility.

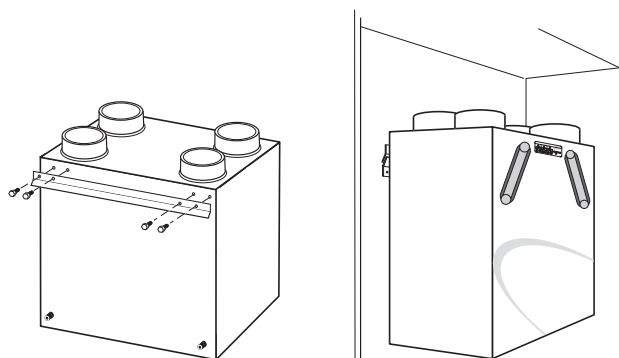
### NO REQUIREMENT FOR TRICKLEVENTS

Reduces noise from outside - overcome draught issues.

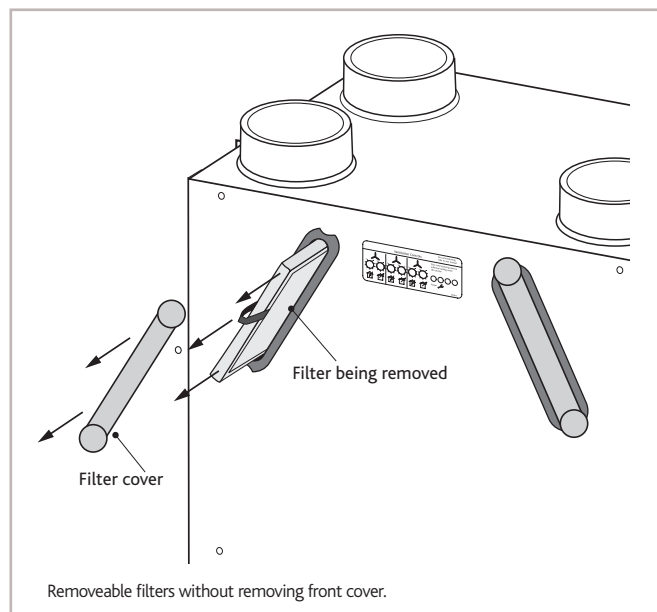
### 5 YEAR WARRANTY

5 year parts and 1 year labour warranty guarantee reduced life costs and peace of mind.

## INSTALLATION FEATURES

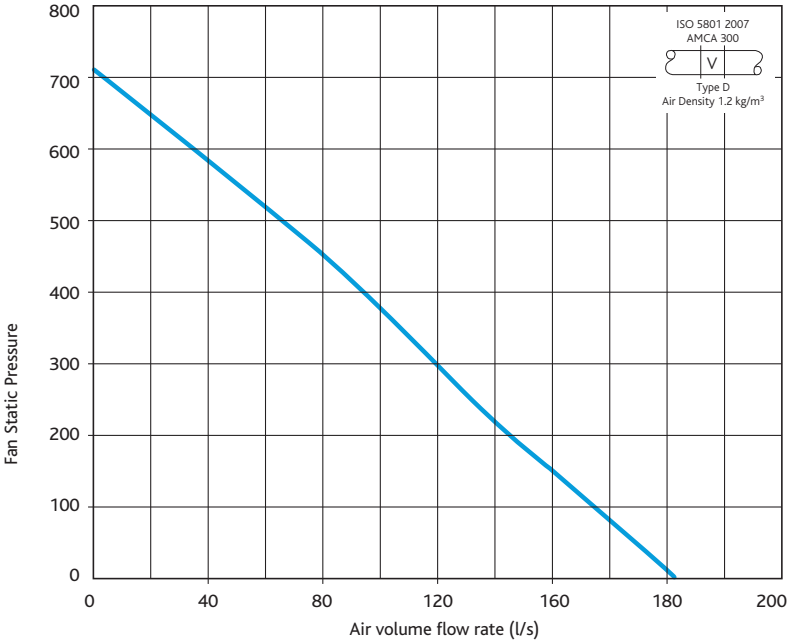


Typical cupboard installation of MRXBOX95AB-WH2



PERFORMANCE

MRXBOX95AB-WH2



Code descriptions

MR-XBOX95AB-WH2

- 1
- 2
- 3
- 4
- 5
- 6
- 
- Multi-room supply and extract heat recovery
  - Product range
  - Efficiency
  - Automatic Summer Bypass
  - Wall/cupboard application
  - High 2 Model

MRXBOX95AB-WH2

ELECTRICAL & SOUND

Curve	Maximum power consumption (Watts)		Sound Power Levels dB re 1pW								dBA @3m
			63	125	250	500	1K	2K	4K	8K	
1	337	Open inlet	58	56	57	63	57	51	46	45	61
		Open outlet	67	63	65	75	68	63	56	53	
		Breakout	61	61	60	63	53	48	40	35	

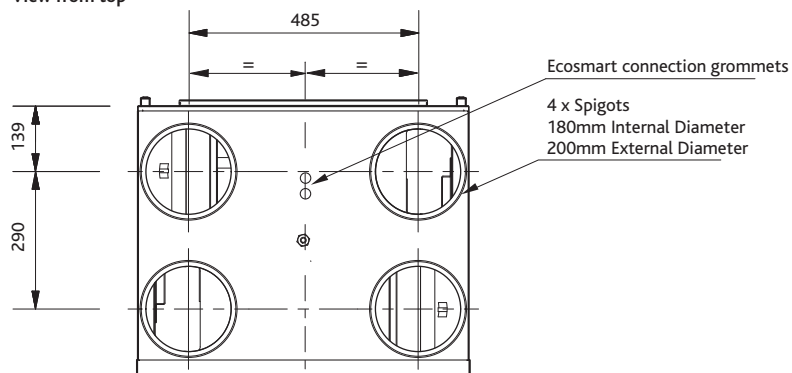
Above noise measured at stated percent of maximum working pressure.

SAP APPENDIX Q TEST RESULTS

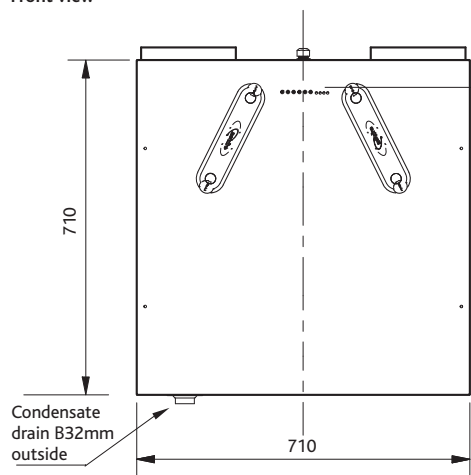
Application	Specific fan power (W/l/s)	Heat exchange efficiency	Energy Saving Trust Best Practice Compliant	Application	Specific fan power (W/l/s)	Heat exchange efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 wet room	0.60	89%	Yes	Kitchen + 5 wet rooms	0.67	87%	Yes
Kitchen + 2 wet rooms	0.56	89%	Yes	Kitchen + 6 wet rooms	0.76	87%	Yes
Kitchen + 3 wet rooms	0.56	89%	Yes	Kitchen + 7 wet rooms	0.90	86%	Yes
Kitchen + 4 wet rooms	0.61	88%	Yes				

## DIMENSIONS MRXBOX95AB-WH2

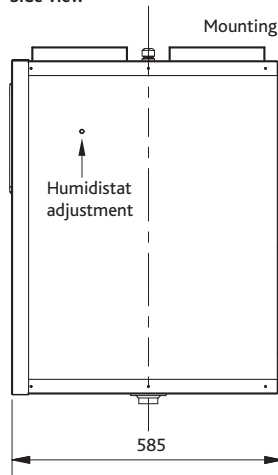
View from top



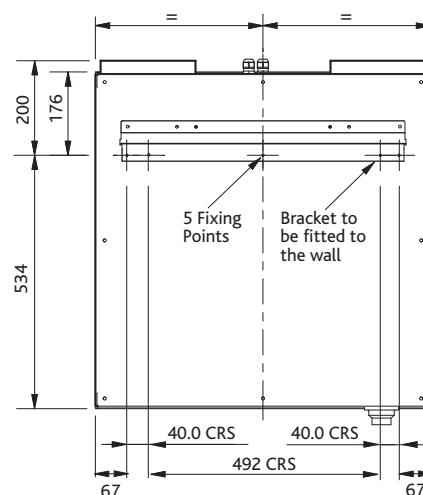
Front view



Side view



Dimensions: Unit wall mounting bracket position (viewed from the back).



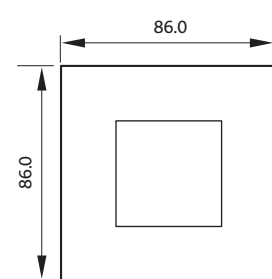
### Status Indication

The status of the unit is indicated by a series of LED's on the front cover. The variants are listed below.

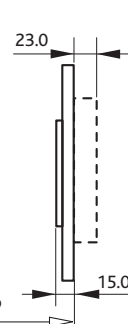
Normal Mode	●	○	○	○
Boost	●	○	●	○
Summer Boost	●	○	●	○
Frost Protection	●	○	●	●
Summer Bypass	●	○	●	●
Filter Change	●	○	○	●
Supply Fan Fault	●	●	○	○
Extract Fan Fault	●	●	○	○

### Dimensions: MRXBOX95-3SWITCH

Front view



Side view



## ELECTRICAL CONNECTION

Please note: the electrical connection of the unit must be carried out by a qualified electrician.

The unit is supplied with a flexible cord for connection to the mains supply.

### Electrical details:-

**Voltage:** 230V 1ph 50Hz

**Consumption:** 2.5 Amp

**Fuse rating:** 5 Amp

**NOTE:** In the event of 1kV transients the fans may stop running, normal operation will be resumed when the interference has ceased.

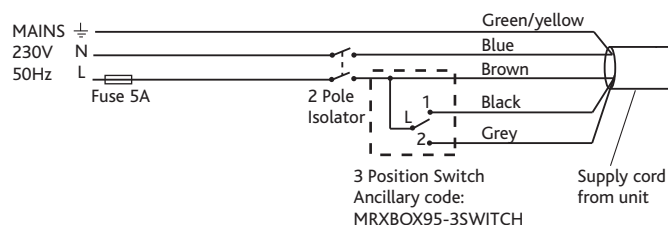
The mains power supply cable should be connected to a fixed wiring installation, via a fused isolator, in accordance with current IEE wiring regulations.

## SWITCH

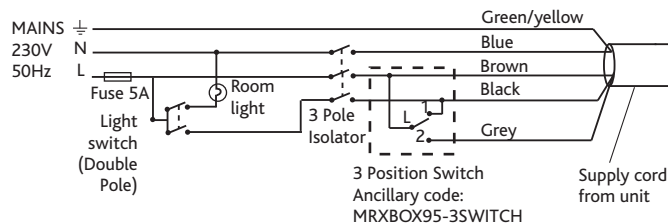
To fix the switch to a wall or back box remove the front fascia by inserting a terminal screwdriver into the two openings along the bottom edge and prize open gently. The fixing points on the back plate can then be accessed, once the switch has been secured the front fascia can then be re-fitted.

## MRXBOX95AB-WH2 WIRING

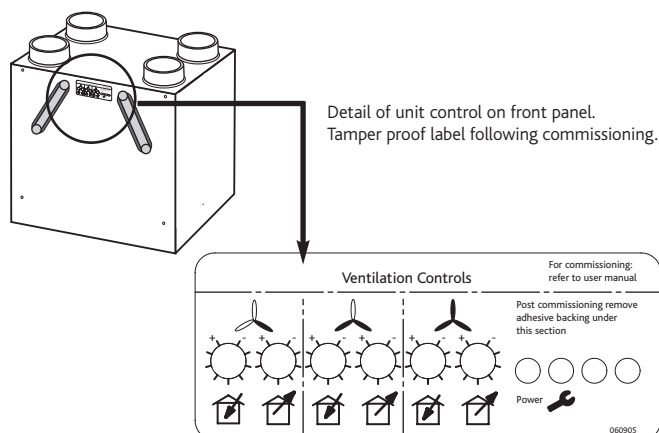
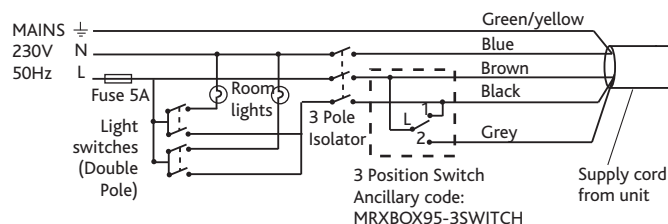
### UNIT SERVING KITCHEN AND BATHROOM



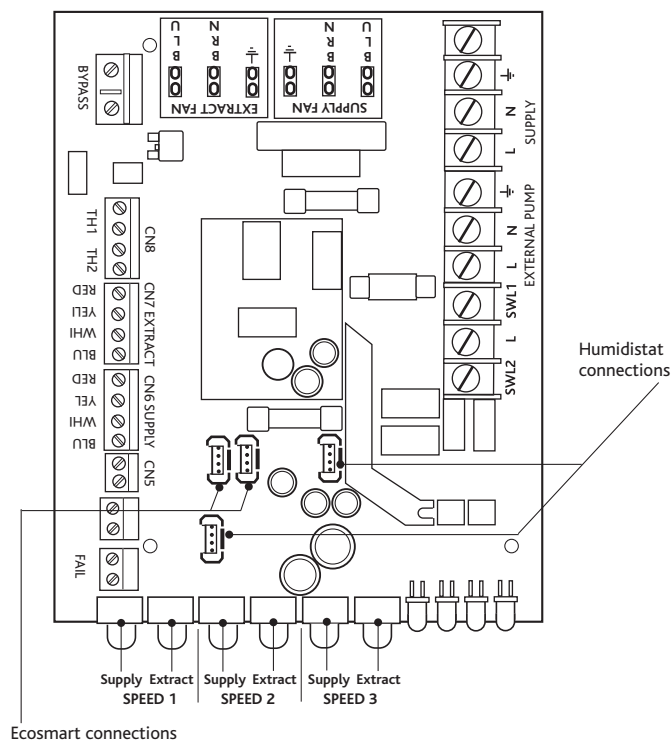
### UNIT SERVING ONE BATHROOM



### UNIT SERVING TWO BATHROOMS



Note: Wiring is for reference purposes only as the connections are factory fitted. The unit is pre-wired with a 2 metre fly lead.



## CONSULTANTS SPECIFICATION

### OPERATION

The supply and extract ventilation unit shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit, shall supply filtered fresh air to each of the habitable rooms and vitiated air shall be extracted from the wet areas e.g. bathroom, en-suite, w.c, kitchen, utility rooms, etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element.

The extracted air shall also be filtered before it reaches the heat exchanger block.

The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light / remote switches.

When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation), boost speed, via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

### MRXBOX95AB-WH2 - SPECIFICATION

The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi plate counter flow high efficiency heat exchanger block, with a thermal efficiency of up to 95%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract.

The heat exchanger and filters shall be accessible via the front access panel, enabling quick and easy maintenance.

The unit shall have low energy, high efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward curved centrifugal type. The motors shall be suitable of an ambient temperature of 40°C.

The unit shall be supplied complete with a condensate drip tray and 32mm drain connection.

The unit shall be suitable for 180 and 200mm diameter circular ducting.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule.

Units shall be MRXBOX95AB-WH2 as manufactured by Nuaire.

### INTEGRAL AUTOMATIC SUMMER BYPASS

The bypass damper shall open automatically via a wax actuator allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

### INTEGRAL HUMIDITY SENSOR

The integral humidity sensor incorporated within the extract fan chamber will automatically boost both the extract and supply fan, to the commissioned boost speed, when the humidity level exceeds that set by the side panel mounted adjustment potentiometer.

### OPTIONAL REMOTE SWITCH (MRXBOX95-3SWITCH)

The unit shall have the facility to wire a three position remote switch to a suitable location within the property. The switch shall have 3 settings, trickle, boost and summertime boost facility. The remote switch will act as the master switch and will override all other switches.

### CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components pre-wired and factory fitted by the manufacturer:

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral fan failure indication.
- Integral S/L terminal for boost to commissioned level, from remote switch, e.g. light switch.
- Integral S/L terminal for summertime boost speed, from remote switch e.g. plate switch.
- Integral heat exchanger frost protection.
- Discreet daily run monitor.
- Remote fail indicator (Part number-MRXBOX95LH-RFI).
- Indication and controls - The unit shall have clear LED visual indication for maintenance, servicing and operation mode i.e. summer bypass, frost protection.

The unit shall be offered with a 5 year warranty.

The manufacturer's recommendations should be observed at all times. The unit shall be the MRXBOX95AB-WH2 and shall be manufactured by Nuaire.